DT07 Rec'd PCT/PTO 0 8 FEB 2005

Approved for use through 3/31/2007. OMB 0651-0021

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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TRANSMITTAL LETTER TO THE UNITED STATES		ATTTORNEY'S DOCKET NUMBER VOY-007US						
DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A SUBMISSION UNDER 35 U.S.C. 371		U.S. APPUCATION NO. (If known_see 37 CFR 1.5)						
INTERNATIONAL APPLICATION NO. PCT/US2003/027341	INTERNATIONAL FILING DATE August 28, 2003	PRIORITY DATE CLAIMED August 28, 2002						
TITLE OF INVENTION Method and System for Dynamic Modeling and Recipe Optimization of Semiconductor Etch Processes								
APPLICANT(S) FOR DO/EO/US Kun Li, Mark A. Erickson, Ioannis Kanellakopoulos								
Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:								
1. X This is a FIRST submission of items concerning a submission under 35 U.S.C. 371.								
2. This is a SECOND or SUBSEQUENT subr	This is a SECOND or SUBSEQUENT submission of items concerning a submission under 35 U.S.C. 371.							
This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below.								
. X The US has been elected (Article 31).								
5. A copy of the International Application as	A copy of the International Application as filed (35 U.S.C. 371(c)(2))							
a. is attached hereto (required on	a. is attached hereto (required only if not communicated by the International Bureau).							
b. 🔣 has been communicated by the	b. X has been communicated by the International Bureau.							
c. is not required, as the applicati	c. is not required, as the application was filed in the United States Receiving Office (RO/US).							
6. An English language translation of the In	6. An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).							
a. is attached hereto.	a. is attached hereto.							
<u> </u>	b. has been previously submitted under 35 U.S.C. 154(d)(4).							
7. Amendments to the claims of the Interna	Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))							
a. are attached hereto (required	a. are attached hereto (required only if not communicated by the International Bureau).							
b. have been communicated by								
c. have not been made; howeve	c. have not been made; however, the time limit for making such amendments has NOT expired.							
d. have not been made and will	d. have not been made and will not be made.							
8. An English language translation of the a	An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).							
9. An oath or declaration of the inventor(s)	An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)). (unsigned)							
An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).								
Items 11 to 20 below concern document(s) or information included:								
11. An Information Disclosure Statement und	An Information Disclosure Statement under 37 CFR 1.97 and 1.98.							
12. An assignment document for recording.	An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.							
A preliminary amendment.								
An Application Data Sheet under 37 CFR 1.76.								
15. A substitute specification.	A substitute specification.							
16. A power of attorney and/or change of ad-	A power of attorney and/or change of address letter.							
17. A computer-readable form of the sequen	A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 37 CFR 1.821- 1.825.							
	A second copy of the published International Application under 35 U.S.C. 154(d)(4).							
	A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).							
20. Copy of Other items or information:	Other items or information: Copy of WO 2004/021405 A3; Return Postcard							

This collection of information is required by 37 CFR 1.414 and 1.491-1.492. The information is required to obtain or retain a benefit by the public, which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 15 minutes to complete, including gathering information, preparing, and submitting the completed form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450. Page 1 of 2

i. 4	41			Ar		PTO-1390 (Rev. 02-2005) 31/2007, OMB 0651-0021
Approved for use through 3/31/2007. OMB 0651-002 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERC Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control numbe						
U.S. APPLICATION NO. (ij known see 37 CFR 1.5) INTERNATIONAL APPLICATION NO.					ATTORNEY'S DOCKET NUMBER	
		PCT/US2003	/027341	VOY-007US		
The following fees have been submitted				CALCULATIONS	PTO USE ONLY	
21. X Basic national fee\$300					\$ 300	
22. X Examination fee If International preliminary examination report prepared by USPTO and all claims satisfy provisions of PCT Article 33(1)-(4)					\$ 200	
23. Search fee Search fee (37 CFR 1.445(a)(2)) has been paid on the international application to the USPTO as an International Searching Authority					_{\$} 100	
1	TOTAL OF 21, 22	2 and 23 =			\$ 600	
Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing or computer program listing filed in an electronic medium). The fee is \$250 for each additional 50 sheets of paper or fraction thereof.						
Total Sheets	Extra Sheets		th additional 50 or fraction up to a whole number)	RATE	_	
- 100 =	/50 =			× \$250	\$ 0	
Surcharge of \$130.00 for furnishing the oath or declaration later than 30 months from the earliest claimed priority date (37 CFR 1.492(e)).					\$ 0	
CLAIMS	NUMB	ER FILED	NUMBER EXTRA	RATE	\$	
Total claims	39	- 20 =	19	x \$ 50	\$ 950	
Independent claim	ns :	3 - 3 =	0	× \$200	\$ 0	
MULTIPLE DEPE	NDENT CLAIM(S	S) (if applicable)		+ \$360	\$	
TOTAL OF ABOVE CACULATIONS =				\$ 1550		
Applicant claims small entity status. See 37 CFR 1.27. Fees above are reduced by 1/2.						
SUBTOTAL =				s 1550		
Processing fee of \$130.00 for furnishing the English translation later than 30 months from the earliest claimed priority date (37 CFR 1.492(f)).			\$			
TOTAL NATIONAL FEE =			L NATIONAL FEE =	\$ 1550		
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property +					\$	
TOTAL FEES ENCLOSED =					s 1550	
					Amount to be refunded:	\$
					Amount to be charged:	\$
a. A check in the amount of \$ 1550.00 to cover the above fees is enclosed.						
b. Please charge my Deposit Account No in the amount of \$ to cover the above fees. A duplicate copy of this sheet is enclosed.						
c. The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit t Account No. 23-3000A duplicate copy of this sheet is enclosed.						
d. Fees are to be charged to a credit card. WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.						
NOTE: Where an appropriate time limit under 37 CFR 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b) must be filed and granted to restore the International Application to pending status.						
SEND ALL CORRESPONDENCE TO: Wood, Herron & Evans, L.L.P. Joseph R. Jordan						
1 443 17: 0+ 0-: +- 2700					•	
Cincinnati, Ohio 45202 Joseph					R. Jordan	
	25,686 REGISTRATION NUMBER					

FORM PTO-1390 (REV. 02-2005)

Page 2 of 2

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventors:

Kun Li et al.

Int'l PCT No.:

PCT/US2003/027341

PCT filing date:

August 28, 2003

Title:

METHOD AND SYSTEM FOR DYNAMIC MODELING AND RECIPE

OPTIMIZATION OF SEMICONDUCTOR ETCH PROCESSES

Mail Stop PCT Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

CERTIFICATE OF EXPRESS MAILING "EXPRESS MAIL" MAILING LABEL NO. EV536050489US

DATE OF DEPOSIT: February 8, 2005

I hereby certify that this paper or fee is being deposited with the United States Postal Service "EXPRESS MAIL POST OFFICE TO ADDRESSEE" service under 37 CFR 1.10 on the date indicated above and is addressed to: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Kenneth Eads

Date: February 8, 2005

Enclosed:

Certificate of Express Mailing
Transmittal Letter Form PTO-1390
Unsigned Declaration
Copy of Publication No. WO 2004/021405 A3
Copy of Article 19 Amendments Dated November 17, 2003
Check in amount of \$1550 for filing fee
Postcard